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Means and mechanisms for strengthening inter-agency cooperation and increasing the use of space applications and services within and among entities of the United Nations system

Means and mechanisms for strengthening inter-agency cooperation and increasing the use of space applications and services within and among entities of the United Nations system

Note by the Secretariat

I. Introduction

1. At its forty-third session, held in Vienna from 7 to 16 June 2000, the Committee on the Peaceful Uses of Outer Space agreed[1] that the item entitled "Means and mechanisms for strengthening inter-agency cooperation and increasing the use of space applications and services within and among entities of the United Nations system" should be considered by the Committee's Scientific and Technical Subcommittee beginning from its thirty-eighth session in accordance with the following work plan:

2001 An analysis of the current levels of usage of space applications and services within the United Nations system, including one day for presentations by appropriate United Nations entities and Member States that undertake cooperative activities with those entities; and an examination of the utility of space applications and services for increasing, with regard to space activities, the effectiveness, efficiency and coordination of the operations of United Nations entities

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2002 An identification of the barriers to greater use of space applications and services within the United Nations system and an examination of specific means and mechanisms to eliminate those barriers

2003 The development of specific and concrete proposals and, as appropriate, action plans for strengthening inter-agency cooperation in the use of space within the United Nations system and for increasing the use of space applications and services within the system in general and among particular United Nations entities

At the same session, in connection with the above work plan, the Committee approved the list of questions contained in the note by the Secretariat of 26 April 2000 (A/AC.105/L.223) for circulation to the organizations of the United Nations system.

2. The organizations of the United Nations system were subsequently invited by the Office for Outer Space Affairs to provide information in response to the questions. In its resolution 55/122 of 8 December 2000, the General Assembly encouraged all the organs, organizations and programmes of the United Nations system to contribute to the work of the Subcommittee by providing it with appropriate information in response to the list of questions.

3. Replies were received from 18 of 37 offices and departments of the Secretariat, programmes, funds, regional commissions, specialized agencies and other United Nations entities that had received the request. Twelve of these provided complete information in response to the questions. Any additional information received after 31 December 2000 will be made available in an addendum to the present document.

II. Overview of the replies to the questions contained in document A/AC.105/L.223

A. General questions

4. The organizations of the United Nations system (hereinafter "the organizations") were requested to describe their mandates and major objectives for the next five years. Their mandates cover a wide range of subjects, such as economic and social affairs, humanitarian affairs, disaster reduction and emergency response, protection of refugees, the environment, drug control, trade, food and agriculture, civil aviation, meteorology and hydrology and intellectual property. Within their respective mandates and fields of competence, they aim to achieve their major objectives through a variety of actions. Detailed information on their mandates and objectives will be made available to the Subcommittee in a conference room paper. In order to achieve the goals set by their member States, many organizations serve as focal points for international cooperation, provide assistance in policy development and formulation of standards and recommended practices, promote coordination among relevant organizations, mobilize resources and provide technical advisory services. Building regional, national and institutional capacity in support of the goals set by member States is in many cases one of their major objectives.

B. Status of the use of space science and technology

5. The organizations were requested to provide information on the use of space science and technology and its applications in achieving their objectives. The annual report of the Secretary-General on the coordination of outer space activities within the United Nations system contains detailed information on the space-related activities, including the use of space applications, planned by the organizations. The latest report of the Secretary-General at the time of the preparation of the present document (A/AC.105/726),[2] contains information provided by the secretariat of the International Strategy for Disaster Reduction, the United Nations International Drug Control Programme (UNDCP), the Economic Commission for Africa (ECA), the Economic Commission for Europe (ECE), the Economic and Social Commission for Asia and the Pacific (ESCAP), the United Nations Environment Programme (UNEP), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Civil Aviation Organization (ICAO), the International Telecommunication Union (ITU), the World Meteorological Organization (WMO), the International Maritime Organization (IMO) and the United Nations Industrial Development Organization (UNIDO). The report does not include information on the use of space technologies by the Office for the Coordination of Humanitarian Affairs, ECE, the Office of the United Nations High Commissioner for Refugees (UNHCR) or the World Intellectual Property Organization (WIPO). Information provided by those organizations on their use of space applications is summarized in table 1.

Table 1

Use of space applications by the Office for the Coordination of Humanitarian Affairs, the Economic Commission for Europe, the Office for the United Nations High Commissioner for Refugees and the World Intellectual Property Organization

Organization	*Use of space applications*
Office for the Coordination of Humanitarian Affairs	The Office uses remote sensing both as a tool to carry out its response and preparedness activities and as a coordination tool to share available sensor data with its humanitarian partners.
ECE	ECE uses geographic information system (GIS) applications in the enhancement of transport, protection of the environment, and promotion of trade. GIS applications are also used to show road transport networks and traffic flows in Europe.
UNHCR	UNHCR uses satellite telephone communications, satellite tele-video-conferencing, the global positioning system (GPS) and satellite remote sensing imagery. UNHCR uses GPS to record the location of refugee camps, entry points, place of origin, villages, road networks and other parameters of interest to it. Satellite remote sensing imagery is used for environmental assessment of refugee camp hosting areas. The recorded GPS data, satellite imagery and information derived from them are stored in a GIS.
WIPO	WIPO utilizes space applications to facilitate communications and encourage education and training.

6. Some of the organizations that already carry out space-related activities plan to expand the use of space science and technology in some areas of their mandated activities. They were requested to identify potential obstacles to those plans and their replies are summarized in table 2.

Table 2
Areas for expanded use of space applications and potential obstacles

Organization	*Areas in which the use of space applications could be expanded*	*Potential obstacles*
Office for the Coordination of Humanitarian Affairs	Use of high-resolution imagery (1 m) and other information in a geographic information system; use of radar and heat sensor data.	High cost of imagery; restricted character of the use of some sensors.
ECE	Infrastructure networks and traffic; land cover information.	Not identified.
ESCAP	Environmental and natural resource management; poverty alleviation; natural disaster reduction; food security and agricultural systems; capacity-building; human resource development and education; health care and hygiene; sustainable development planning.	Limited financial and human resources.
UNHCR	Use of the global positioning system and remote sensing images in operational planning and emergency response.	Not identified.
UNDCP	Use of high-resolution imagery for the development of integrated solutions that will support monitoring activities and alternative development projects.	Insufficient funding.
FAO	Early warning for food security; crop forecasting; forest and water resource assessment; land cover/land use mapping and monitoring; marine fisheries and coastal zone management applications; implementation of environmental conventions; implementation of the Integrated Global Observing Strategy, the Global Terrestrial Observing System and the terrestrial carbon observation theme.	Insufficient financial and staff resources.
ICAO	Worldwide implementation of satellite communications, navigation, surveillance and air traffic management.	Limited availability of financial resources.
WMO	Use of next-generation operational meteorological satellite data, products and services; use of research and development satellite systems data and products.	Developing continuity of observation guidelines for research and development satellites.

7. The Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean of the Department for Disarmament Affairs, the Office of the Special Coordinator for Africa and the Least Developed Countries of the Department of Economic and Social Affairs of the Secretariat and the Economic Commission for Latin America and the Caribbean (ECLAC) currently do not utilize space technology. However, they expressed interest in doing so in some areas of

activity mentioned in the report of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) [3] Their replies are summarized in table 3.

8. In order to incorporate the use of space science and technology and its applications into their programme of work, the three organizations indicated that it would be necessary to have access to information on developments in space applications, partnership with donor countries and a mandate from the legislative body. In addition to those organizations, some others indicated that increased integration of government resources, increased availability of products, appropriate solutions to user requirements, additional human resources and training and additional financial resources for the organization would also be necessary.

Table 3
Areas of activity for the possible use of space applications

Areas covered in the report of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space	*Office of the Special Coordinator for Africa and the Least Developed Countries*	*Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean*	*ECLAC*
Protecting the environment			
(a) Enhancing scientific knowledge of Earth and its environment;	X		X
(b) Enhancing management of the environment and natural resources.			
Weather and climate forecasting			X
Disaster management	X		X
Management of resources	X		X
Disease control and health services	X		X
Facilitating and utilizing communications	X		X
Improving and using positioning/location capabilities		X	X
Encouraging education and training in science and technology	X	X	X
Developing and strengthening information infrastructure	X		X

9. In order to improve their working methods and cost-efficiency in their operations, the Office for the Coordination of Humanitarian Affairs, ECE, ECLAC, UNHCR, FAO, ICAO, WMO and WIPO all used space-related technologies. The use of video- and teleconferencing was becoming increasingly common in the daily conduct of operations. In some cases, remote sensing translation/interpretation and video- and teleconferencing with the use of space-related technologies were being provided to the organizations through secretariat units responsible for conference

services. FAO pointed out that data and information networking, standardization and integration of remote sensing/geographic information system (GIS) and global positioning system (GPS) technologies would increase further the cost-efficiency of its operation. ICAO indicated that information on the availability of services with the use of space-related technology would be helpful. While the Office of the Special Coordinator for Africa and the Least Developed Countries and ESCAP expressed interest, they indicated the need for additional resources.

C. Capacity-building in promoting sustainable development

10. As stated in the report of UNISPACE III, space science and technology applications can make significant contributions to promoting sustainable development. Many organizations of the United Nations system carry out capacity-building activities in order to promote sustainable development, in particular in developing countries. Those organizations were requested to indicate if the use of space science and technology was addressed in their capacity-building activities and, if not, the reasons why.

11. The Regional Centre, the Office for the Coordination of Humanitarian Affairs, the secretariat of the International Strategy for Disaster Reduction (ISDR), ECE, ECLAC, ESCAP, UNHCR, UNDCP, FAO, ICAO, WMO and WIPO indicated that the use of space science and technology was addressed in their capacity-building activities. The Division for Sustainable Development of the Department of Economic and Social Affairs of the Secretariat was of the view that the use of space science and technology was not relevant to its capacity-building activities. While the Office of the Special Coordinator for Africa and the Least Developed Countries of the same Department was aware of the potential benefits of space science and technology, it indicated that there was a lack of information on specific applications and that the subject was therefore not addressed in its capacity-building activities.

D. Promoting international cooperation through development of an international legal regime

12. Many organizations contribute to the development and promotion of international legal regimes and/or international standards and recommended practices. Organizations were requested to indicate if space-related activities were covered or would be covered in such activities and, if so, how. The replies that indicated some degree of relevance to space-related activities are summarized in table 4. Space-related activities could have relevance to the development of international legal regimes and/or standards and recommended practices at least in three ways. Firstly, space-related activities, or activities using space-related technology, could be governed or regulated by the legal regime in question (case 1). Secondly, the use of space-related technology could be a tool for strengthening and/or promoting the legal regime in question, for example, by providing a means for verification of compliance (case 2). Thirdly, international agreements in the field of space activities could have an impact on implementation of other international legal instruments (case 3).

Table 4
International regimes, standards and recommended practice with relevance to space-related activities

Organization	*Areas of international regimes, standards and recommended practice with relevance to space-related activities*	*Case* 1	2	3
Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean	Selective control regimes on space technology transfers, development of ballistic missile defences and ballistic missile development.	X		
Office for the Coordination of Humanitarian Affairs	Geo-coding standards for information-sharing and common arrangements for the purchase of remote sensing imagery and its sharing among humanitarian partners.	X		
ISDR	Vulnerability reduction and disaster prevention.		X	
ECE	Guidelines on spatial metadata and integration of statistics and spatial data.	X		
ECLAC	Results of UNISPACE III and the implementation of various multilateral environment agreements, such as the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification in Those Countries Experiencing Drought and/or Desertification, particularly in Africa, the United Nations Convention on the Law of the Sea and the related Agreement.			X
UNHCR	International protection of and assistance to refugees.		X	
UNDCP	Conventions on international drug control, implementation of recommendations of the twentieth special session of the General Assembly (Political Declaration, and six Action Plans).		X	
FAO	The Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification in Those Countries Experiencing Drought and/or Desertification, particularly in Africa, the Kyoto Protocol and land-cover/land-use classification.		X	
ICAO	Standards and recommended practices that apply to all aspects of aviation and the global structures that support it; a convention to govern the operation of global navigation satellite systems is under consideration.	X	X	
WMO	Standardization of meteorological and related observations and uniform publication of observations and statistics.	X		
WIPO	Intellectual property rights; rules and/or principles concerning the protection of inventions made or used in outer space to be studied.	X		

E. Coordination of space-related activities within the United Nations system

13. Recognizing the increasing need to coordinate the space activities of the various organizations of the United Nations system, the Administrative Committee on Coordination in 1975 established a subcommittee on outer space activities. That subcommittee, which later came to be known as the Ad Hoc Inter-Agency Meeting on Outer Space Activities, was given responsibility for ensuring cooperation among organizations interested in future programmes and projects in the fields of communications, meteorology, remote sensing and GIS. Following a decision of the Organizational Committee of the Administrative Committee in April 1993 concerning the restructuring of the machinery of the latter, the Ad Hoc Inter-Agency Meeting on Outer Space Activities ceased to be a subsidiary body of the Administrative Committee. The Inter-Agency Meeting on Outer Space Activities has continued to meet annually, however, and has provided a forum for the participating organizations of the United Nations system to exchange information and views on current and future plans for space-related activities of common interest and to promote synergy among the activities of the United Nations system. The Inter-Agency Meeting has continued to report to the Committee on the Peaceful Uses of Outer Space and its Scientific and Technical Subcommittee on the coordination of space-related activities in the United Nations system. As part of its work, it prepares the report of the Secretary-General on the coordination of outer space activities planned by various organizations of the United Nations system.

14. The secretariat of ISDR, ECA, ESCAP, UNEP, UNDCP, FAO, UNESCO, ITU, WMO, WIPO, UNIDO and the International Atomic Energy Agency (IAEA) have been participating in the work of the Inter-Agency Meeting on Outer Space Activities on a regular basis. ICAO has also been participating in its work, but not on a regular basis owing to budgetary constraints. The Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean, the Office for the Coordination of Humanitarian Affairs, the Division for Social Development, the Office of the Special Coordinator for Africa and the Least Developed Countries, ECE, ECLAC and UNHCR have not been participating in the work of the Inter-Agency Meeting for the reasons indicated in table 5.

15. On the basis of information provided in the report of the Secretary-General on the coordination of outer space activities (A/AC.105/726), organizations were requested to indicate the areas of activity in which inter-agency coordination could be enhanced. Their replies are summarized in table 6.

16. The replies from the organizations indicate that inter-agency coordination could be enhanced, in particular in the field of remote sensing and GIS, through education and training activities, operational activities and dissemination of information. As for operational activities, many organizations indicated environment management, disaster management and development of information infrastructure as areas of activity for enhancement of inter-agency coordination. WMO was of the view that inter-agency coordination in the areas that it indicated was already an excellent example of effective cooperation.

Table 5

Reasons for non-participation in the Inter-Agency Meeting on Outer Space Activities

Organization	*Reasons for non-participation*
Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean of the Department for Disarmament Affairs	Centre reactivated less than a year ago.
Office for the Coordination of Humanitarian Affairs	Not informed.
Division for Sustainable Development	No relevance to its work.
Office of the Special Coordinator for Africa and the Least Developed countries	Not invited.
ECE	Lack of resources and funding.
ECLAC	Budgetary constraints; limited relevance to its work.
UNHCR[a]	Not invited; participating in other inter-agency activities related to space-based applications, such as the ad hoc Geographic Information Support Team.

[a]Following the initial contact by the Office for Outer Space Affairs in early 2000, UNHCR was invited to participate in the work of the Inter-Agency Meeting on Outer Space Activities at its twenty-first session and to contribute to the next report of the Secretary-General on the coordination of outer space activities, to be submitted to the Scientific and Technical Subcommittee at its thirty-eighth session.

17. The organizations were then requested to identify potential obstacles to the enhancement of inter-agency coordination in the areas they had mentioned. Their replies are summarized in table 7.

18. Of all the organizations that identified potential obstacles to the enhancement of inter-agency coordination in space-related activities, more than two thirds indicated insufficient resources as an obstacle. This could very well be due to limited awareness of the cost-effectiveness of the use of space technologies as a tool to achieve their objectives through their mandated activities. For those organizations which were already aware of the potential benefits of space applications, insufficient resources might not allow them to make the necessary initial investment, for example, to train their personnel, recruit experts and to acquire essential equipment and data.

19. Insufficient funding could also be related to various other obstacles that were identified, such as lack of a mandate for space-related activities and higher priority given to other activities. Those elements could have lead some organizations not to consider inter-agency coordination in space-related activities a high-priority activity.

Table 6
Areas of activity for enhancement of inter-agency coordination

Area of activity	*Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean*	*Office for the Coordination of Humanitarian Affairs*	*Division for Sustainable Development*	*Office of the Special Coordinator for Africa and the Least Developed Countries*	*International Strategy for Disaster Reduction*	*ECE*	*ECLAC*	*ESCAP*	*UNHCR*	*UNDCP*	*FAO*	*ICAO*	*WMO*	*WIPO*
Education and training activities														
Remote sensing and geographic information system (GIS)			X	X	X	X	X			X	X			X
Satellite communications		X	X	X		X	X				X	X		X
Disaster management		X	X		X	X	X				X			X
Other	X[a]	X	X				X				X			X
Operational activities														
Remote sensing and GIS		X	X	X		X			X[b]	X	X			X
Earth observation			X						X[b]		X		X[c]	X
Climate research		X	X								X		X[c]	X
Meteorology and operational hydrology		X	X			X					X	X	X[c]	X
Environment management (including environment assessment, environment information systems, environment decision support systems)		X	X	X				X	X[b]	X	X	X		X
Management of natural resources		X	X	X				X		X	X			X
Development of information infrastructure		X	X	X		X		X		X	X			X
Distance learning/education and tele-medicine		X	X	X				X			X		X[c]	X
Navigation satellite systems		X	X			X					X	X		X
Disaster management (including prevention, mitigation, early warning, relief and rehabilitation)		X	X		X			X	X		X	X		X
Other		X	X			X[d]		X[e]			X			X
Dissemination of information														
Remote sensing and GIS		X	X	X		X	X		X[b]	X	X			X
Climate research		X	X				X				X			X
Disaster management			X		X		X		X[b]		X			X
Space science and technology (general information)		X	X			X	X			X	X			X
Other		X	X				X	X[f]			X			X

[a] Knowledge of the dual-use nature of launch rockets, satellites and tracking stations.

[b] Cost versus copyright issues for United Nations use, especially during emergencies, could benefit inter-agency coordination through the Inter-Agency Meeting on Outer Space Activities.

[c] Inter-agency coordination in the area is already an example of effective cooperation.

[d] Infrastructure planning.

[e] Poverty alleviation.

[f] Best practices in specific areas of space applications; cooperation opportunities; and education and training opportunities and fellowships.

Table 7
Potential obstacles to the enhancement of inter-agency coordination

Organization	*Potential obstacles*
Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean	Insufficient funding; nature of the mandates of other agencies.
Office for the Coordination of Humanitarian Affairs	Insufficient resources, insufficient information classification and limited availability of know-how.
Division for Sustainable Development	Insufficient resources.
ISDR	Poor knowledge on the part of those involved of the potential advantages of enhanced use of satellite applications for disaster reduction; lack of case studies/pilot projects in that specific area; difficulties in inter-agency cooperation/coordination.
ECE	Insufficient human and financial resources.
ECLAC	Lack of specific mandates; lack of staff and financial resources.
ESCAP	Limited financial resources; differing requirements, focus of efforts, focal points in member States depending on the mandates of agencies.
UNHCR	Lack of coordination and non-standardized information/data exchange; arrangement of separate practices and conclusion of agreements with implementing partners/data providers without coordination with other organizations; inefficient sharing of information; slow data processing and delivery to the humanitarian relief community.
UNDCP	Insufficient funding; rapid speed of the evolution of technology, which made current methodological approaches obsolete in a matter of a few years.
FAO	Insufficient financial resources; institutional compartmentalization; lack of sufficient coordination at the national level within Governments.
ICAO	Resource restrictions; other high priorities.
WMO	No obstacles.

20. The replies received from UNHCR and the secretariat of ISDR indicated possible directions to be pursued in order to increase the cost-effectiveness of space-based services and products and to increase the awareness of their potential benefits in carrying out the mandated activities of the organizations. Some organizations indicated that there might be a lack of coordination at the national level within Governments of their member States, which could create an obstacle to the enhancement of inter-agency coordination.

F. Opportunities for the future

21. Space applications can make important contributions to implementing some of the proposals announced by the Secretary-General in his report entitled "We the peoples: the role of the United Nations in the twenty-first century" (A/54/2000). That report was submitted to the Millennium Summit, which adopted the United Nations Millennium Declaration. Some of the proposals made could involve the use of space science and technology and its applications, including the United Nations Information Technology Service (UNITeS), the Health InterNetwork, the Millennium Ecosystem Assessment and the "First on the Ground" disaster response initiative.

22. The organizations were requested to indicate the possibility of their participating in activities to implement proposals of the Secretary-General with the use of space applications. Nearly all the organizations that provided information in response to the list of questions responded positively to the question.[4] WMO would contribute to such activities through its active participation in the implementation of ISDR. UNHCR indicated its particular interest in the "First on the Ground" disaster response initiative.

23. The organizations were also invited to suggest ways and means, in addition to the activities conducted through the Inter-Agency Meeting on Outer Space Activities, to strengthen inter-agency efforts to expand the use of space science and technology. Their replies are summarized in table 8. WMO considered that all the organizations of the United Nations system that utilized space technology should be encouraged to attend the Inter-Agency Meeting on Outer Space Activities. WIPO was of the view that activities of the Inter-Agency Meeting should continue in order to facilitate dialogue among the organizations of the United Nations system.

24. The replies from the organizations indicated a need to increase efforts to brief other inter-agency and intergovernmental bodies that were involved in economic and social development on the benefits of space science and technology and its applications in promoting sustainable development. Concerning the operational needs of the organizations, the use of satellite imagery and data should be further facilitated, for example, by reducing the cost and ensuring the timely delivery of certain space-based products through arrangements made in advance for the organizations of the United Nations system. Increased standardization of space-based products, such as satellite data, could also allow for better sharing of information and data among organizations of the United Nations system and for enhanced working partnerships.

G. Conclusion

25. Some organizations of the United Nations system have been active in space-related fields and have been utilizing space technologies in their mandated activities. However, most organizations may not be aware of the potential benefits of the use of space science and technology in achieving their objectives. While UNISPACE III stressed the usefulness and potential benefits of space science and technology and its applications for sustainable development, some key organizations

Table 8
Ways and means to strengthen inter-agency efforts to expand the use of space science and technology

Organization	*Suggestions made*
Office for the Coordination of Humanitarian Affairs	The activities of the Inter-Agency Meeting on Outer Space Activities should be linked to activities of other inter-agency bodies, for example, the Geographic Information Support Team, the United Nations Geographic Information Working Group and the Inter-Agency Standing Committee.
ISDR	An integrated approach should be taken by the Office for the Coordination of Humanitarian Affairs, the secretariat of ISDR, the Office for Outer Space Affairs, and possibly the European Space Agency, to develop standards for satellite applications for disaster reduction and offers should be made to developing countries to implement pilot projects.
UNHCR	UNHCR could take a more formal lead in strengthening inter-agency efforts in the use of satellite imagery and the global positioning system in humanitarian disasters, satellite data providers should give priority to United Nations lead agencies for rapid processing and delivery of space-based imagery and such priorities must be established well in advance through discussions with commercial data providers as well as national and international organizations; cost and copyright issues for the use of satellite imagery should be considered; imagery could, for example, be purchased with multi-licences under the umbrella of the United Nations at significant discounts and shared freely within the United Nations system.
UNDCP	Working partnerships should be built among organizations of the United Nations system, defining responsibilities in terms of spatial data production and maintenance.
ECLAC	The United Nations Development Group and the United Nations Development Assistance Framework, together with the Inter-Agency Committee on Sustainable Development and the Committee on Energy and Natural Resources for Development, should be approached.
ESCAP	Organizations should be encouraged to participate in inter-agency coordination meetings and/or the exchange of information on their activities at the regional level; operational information infrastructure and/or institutional networks should be made accessible to cooperating agencies.
FAO	Increased transparency and genuine technical partnerships as well as joint planning and formulation of activities would be necessary.
ICAO	The United Nations might consider increasing assistance to developing nations in economic, technical and educational spheres to assist in and accelerate the implementation of aviation traffic management services and supporting infrastructure for communications, navigation and surveillance.

responsible for sustainable development do not seem to recognize those benefits. Efforts should therefore be strengthened to reach organizations, in particular those promoting sustainable development, that do not currently utilize space science and technology or are not convinced of the usefulness of space science and technology in order to convince them of the potential benefits of space applications.

26. Potential benefits of space applications may be recognized by those organizations only if there is concrete evidence or data showing cost savings from the use of space technologies compared with conventional methods. Space-related technologies may still be considered by a majority of the organizations as highly advanced, costly technologies, the use of which would require a large amount of financial and human resources that could not easily be justified.

27. Even for an organization that uses space technologies in its mandated activities, it is not necessarily true that the organization as a whole, including its executive office, and its member States appreciate the usefulness and cost-effectiveness of space technologies. In many cases, a limited number of relatively small units or divisions strive to promote the use of space technologies within their organizations. In such cases, activities using space technologies could well be vulnerable if budget constraints arose. Efforts should be made to facilitate the use of space technologies by such users with a view to enhancing significantly their performance in delivering services and products. With that goal in mind, efforts should also be made to increase the availability and reliability of affordable space-based services and products that meet the specific requirements of the beneficiaries of their services. Finally, both within and outside the organization, efforts should be strengthened to increase the recognition and visibility of the achievements made with the use of space-based services and products.

Notes

[1] See *Official Records of the General Assembly, Fifty-fifth session, Supplement No. 20* (A/55/20).

[2] The next report, which will be submitted to the Scientific and Technical Subcommittee, at its thirty-eighth session, will be reviewed and finalized at the twenty-first session of the Inter-Agency Meeting on Outer Space Activities, to be held from 22 to 24 January 2001, and will be made available as document A/AC.105/757.

[3] *Report of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, Vienna, 19-30 July 1999* (United Nations publication, Sales No. E.00.I.3).

[4] The organizations that responded positively to the questions were the Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean, the Office for the Coordination of Humanitarian Affairs, the Office of the Special Coordinator for Africa and the Least Developed Countries, the secretariat of ISDR, UNHCR, UNDCP, ECE, ECLAC, ESCAP, FAO, ICAO, WMO and WIPO.